

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (canceled)

2. (currently amended) The ~~system apparatus~~ of claim 156, ~~wherein the aggregator further comprises~~further comprising:

a decoder and content formatter including a decoder processor that is configured to decode~~decodes~~ the programming for storage; and

a coder and content formatter including a coder processor that is configured to format~~formats~~ the decoded programming for delivery to a user terminal.

3. (currently amended) The ~~system apparatus~~ of claim 156, ~~wherein the aggregator further comprises~~comprising:

a local content storage that is configured to store~~stores~~ one or more programs, and wherein the search engine server is configured to first search~~searches~~ the local content storage before searching the remote sources.

4. (currently amended) The ~~system apparatus~~ of claim 156, ~~wherein the aggregator further comprises~~comprising:

a communications server coupled to the request and results processing server, wherein the communications server is configured to communicate~~communicates~~ with one or more user terminals in ~~the~~ a digital communication network;

a content acquisition server configured to acquire a program responsive to the search engine processor determining that a match exists between the list of active searches and the change made to the program content database; and

a content delivery server coupled to the communications server, wherein the content delivery server is configured to receive~~receives~~ the program from the content acquisition server and ~~provides~~ provide the program to one or more of the one or more user terminals.

5. (currently amended) The ~~system apparatus~~ of claim ~~456~~, wherein the aggregator further comprises further comprising:

a content acquisition server configured to acquire a program responsive to the search engine processor determining that a match exists between the list of active searches and the change made to the program content database; and

a network gateway that couples the search engine server and the content acquisition server to the one or more remote content sources.

6. (currently amended) The ~~system apparatus~~ of claim ~~456~~, wherein the request and results processing server, comprises:

a request receiver and router configured to retrieve administrative data related to a user and route the retrieved administrative data to a terminal associated with the user;

a content download request processor coupled to the request receiver and router, wherein the content download request processor is configured to route a content download request to a content acquisition server, wherein the content acquisition server is configured to acquire a program responsive to the search engine processor determining that a match exists between the list of active searches and the change made to the program content database;

a search request processor coupled to the request receiver and router and to said content search suggestion engine, wherein the search request processor is configured to receive information related to a search request and route the search request to the search engine server;

a search results form builder configured to create an electronic search request from the information related to the search request; and

a scheduled program prompt and notification processor configured to route a notification that content related to the search request is available to the terminal associated with the user.

7. (currently amended) The ~~system-apparatus~~ of claim ~~45~~56, wherein the content search suggestion engine; comprises:

a suggestion database processor configured to perform a search within a suggestion database for additional search criterion to suggest the programming content;

a content metadata crawler configured to receive a prompt from the suggestion database processor, wherein the content metadata crawler is configured to search metadata in a local database responsive to the prompt from the suggestion database processor; and

a suggestion keyword indexer configured to receive a listing of the metadata searched by the content metadata crawler in the local database, index the metadata, and assign the metadata with a vector quantity that describes the metadata as suggestion keywords associated with the programming content; and

~~a suggestion database.~~

8. (canceled)

9. (canceled)

10. (currently amended) The ~~system-apparatus~~ of claim ~~97~~, ~~wherein the suggestion keyword indexer indexes each metadata element, assigns each metadata element an associated vector quantity, the vector quantity describing the metadata element as a suggestion keyword, and~~ wherein the suggestion keyword indexer is further configured to populate~~populates~~ the suggestion database with the indexed suggestion keywords, wherein an index value indicates a proximity of the metadata ~~elements~~ within the suggestion database.

11. (currently amended) The ~~system-apparatus~~ of claim 10, wherein the suggestion database processor comprises a search engine that is configured to search~~searches~~ the suggestion database with a user-supplied search criteria~~criterion~~ and user historical and demographic data to produce a suggested search terms list, wherein search terms in the

suggested search terms list are used to create an augmented search request form, and wherein the augmented search request form is provided to the search request processor.

12. (canceled)

13. (currently amended) The ~~system-apparatus~~ of claim ~~12~~10, wherein the suggestion database processor uses the proximity of the metadata ~~elements~~ to determine a vector relevance of suggestion keywords to search keywords.

14. (currently amended) The ~~system-apparatus~~ of claim 6, wherein the search results form builder is configured to receive~~receives~~ user search results and suggested search results; and produce~~produces~~ a search results form, the search results form comprising programming, scheduling and availability information, and wherein the search results form builder is configured to provide~~provides~~ the search results form to ~~a user~~the terminal.

15. (currently amended) The ~~system-apparatus~~ of claim 14, wherein the search results form further comprises content metadata and identification information.

16. (currently amended) The ~~system-apparatus~~ of claim 6, wherein the request receiver and router, in response to a user request, is configured to open~~opens~~ a dialog with a database administrator in response to a user request, retrievesand wherein the retrieval and routing of the administrative data is based on the opened dialog with the database administrator the requesting user's administrative data, and routes the administrative data to the user's terminal.

17. (currently amended) The ~~system-apparatus~~ of claim 6, wherein the content download request processor is configured to receive~~receives~~ content download requests, authorize~~authorizes~~ the download requests, and sends~~send~~ the authorized download requests to a the content acquisition server.

18. (currently amended) The ~~system-apparatus~~ of claim 6, wherein the search request processor; comprises:

search request processing programs, comprising:

- a search term suggestion program, and
- a search term comparison program.

19. (currently amended) The ~~system-apparatus~~ of claim 6, ~~wherein the scheduled program prompt and notification processor provides a content notification to the user,~~ wherein the content notification comprises one or more of an on-screen pop-up window, audible notification, e-mail notification, and automated telephone notification; ~~and wherein the content notification includes an indication of program availability.~~

20-22. (canceled)

23. (currently amended) The ~~system-apparatus~~ of claim ~~45~~6, wherein the ~~specific program request~~ active searches ~~is provided by~~ are based on receipt of the ~~a~~ user using a search request form.

24. (currently amended) The ~~system-apparatus~~ of claim 23, wherein the search request form comprises:

- a user identification and authorization information;
- a user administration and billing information;
- a search request qualification;
- a search request criteria; and
- a content type.

25. (currently amended) The ~~system-apparatus~~ of claim 24, wherein the user identification and authorization information; comprises:

- a current user identification;

a user network address;
a public encryption key;
digital rights management parameters;
a preferred content format; and
a current hardware configuration, wherein the current hardware configuration is provided to a coder and content formatter that formats the search request form for delivery to a user terminal.

26. (currently amended) The ~~system~~-apparatus of claim 24, wherein the search request qualification, comprises:

a search request initiation time;
a list of search request content types; and
a search request time limit.

27. (currently amended) The ~~system~~-apparatus of claim 24, wherein the search request criteria, comprises:

audio/video programming;
computer software;
electronic book; and
Internet websites.

28. (currently amended) The ~~system~~-apparatus of claim 26, wherein the list of search request content types allows the user to specify one or more of video, audio, software, text, electronic books, and Websites, wherein the search engine server is configured to return~~returns~~ search results based on the list of search result content types.

29. (currently amended) The ~~system~~-apparatus of claim ~~45~~56, wherein the ~~replicated~~ program content database comprises a copy of an aggregator local database, and wherein the search engine server is configured to search~~searches~~ the ~~replicated~~-program content database according to ~~the~~-a search request form.

30. (currently amended) The ~~system apparatus~~ of claim ~~156~~, ~~wherein the content acquisition server, comprises~~further comprising:

a content acquisition server comprising:

a content request processor and router; and

a remote content download processor, comprising a content buffer, wherein the remote content download processor is configured to cache~~eaches~~ programming content while managing a download connection to ~~the~~ remote content sources over ~~the~~ a digital communications network.

31. (currently amended) The ~~system apparatus~~ of claim ~~156~~, further comprising:

a content delivery server; comprising:

a local content request processor configured to initiate delivery of content from local sources,

a digital rights management processor configured to apply a digital rights management (DRM) scheme to the delivered content,

an advertisement processor configured to insert advertising into the delivered content,

a content delivery processor configured to manage the delivery of the delivered content and to validate that the delivered content matches an original content download request, and

an encryption processor configured to encrypt the delivered content.

32. (currently amended) The ~~system apparatus~~ of claim ~~156~~, further comprising:

a system administrator; comprising:

a system administrative server configured to manage communications within the apparatus and manage a list of authorized administration users that manage the apparatus through a set of administration terminals,

a user registration server configured to manage a signup procedure for new users and the termination of user accounts,

a content fee and copyright billing server configured to manage payments of royalties and fees to providers of content,

a user billing server configured to charge a user account when content delivery requires a charge,

a content provider registration server configured to collect registration data from a content provider, and

a database administrator configured to maintain a plurality of databases.

33. (currently amended) A method ~~using a video and multimedia aggregator~~ for finding and retrieving program content from remote sources in a distributed digital communication network, comprising:

receiving a program content search request from a user terminal in the network;

suggesting additional content based on a user's past search ~~criteria~~ criterion or previously downloaded content;

searching a local content database based on the program content search request;

searching one or more remote content databases based on the program content search request;

determining that the program content search request does not yield a matching result with respect to the local content database and the one or more remote content databases;

maintaining a list of a plurality of active searches based on the program content search request responsive to determining that the program content search request does not yield a matching result with respect to the local content database and the one or more remote content databases;

identifying one or more programs based on the active searches;

acquiring one or more of the one or more identified programs from one or more of the local content database and the remote databases ~~in response to said program content search request from said user terminal~~ responsive to a content change made to at least one of the local content database and the one or more remote content databases, the content change matching at least one of the active searches, if said one or more identified

programs has a viewing audience above a predetermined threshold and meets a predetermined selection ~~criteria~~ criterion that rejects specific items;

~~displaying said acquired one or more of the one or more identified programs in response to said program content search request;~~

receiving a user selection for a program of said acquired one or more of the one or more identified programs; and

delivering said user selected program to said user terminal.

34. (currently amended) The method of claim 33, wherein the step of receiving the program content search request, comprises:

receiving search ~~criteria~~ criterion from the user terminal;

processing the received search ~~criteria~~ criterion into a search request form; and

logging the search ~~criteria~~ criterion into a user local database.

35. (currently amended) The method of claim 34, wherein the search request form, comprises:

a user identification and authorization information;

a user administration and billing information;

a search request criteria; and

a program content type.

36. (currently amended) The method of claim 35, wherein the user identification and authorization information comprises:

a current user identification;

an authorization code and password;

a user network address;

a public encryption key;

a digital rights management parameter;

a preferred content format; and

a current hardware configuration, wherein the current hardware configuration is provided to a coder and content formatter that formats the search request form for delivery to a user terminal.

37. (currently amended) The method of claim 35, wherein the search ~~criteria~~ criterion ~~are~~ is received as a free form question, further comprising:

applying a search ~~criteria~~ criterion algorithm to parse the free form question;
analyzing the parsed free form question to identify and categorize significant terms; and

entering the categorized and identified significant terms into the search request form, wherein a search request processor accesses a lexicon of terms to augment the search request.

38. (original) The method of claim 37, further comprising designating additional search parameters, wherein the additional search parameters are based on a type of query word used in the free form question.

39. (original) The method of claim 33, further comprising:

decoding the one or more programs received from the remote databases;
storing the decoded programs;
encoding the stored programs and the programs from the local content database for delivery to the user terminal; and
delivering the encoded programs to the user terminal.

40. (currently amended) The method of claim 33, wherein the remote sources are coupled to the user terminal through a wide area distribution system, wherein program content is delivered directly to ~~a~~ the user terminal thereby bypassing ~~the~~ an aggregator.

41. (currently amended) The method of claim 33, wherein the remote sources are coupled to ~~the~~ an aggregator through a network gateway.

42. (original) The method of claim 33, further comprising:

providing a search results list, the search results list including information related to the one or more identified programs; and
receiving a program acquisition request based on the search results list.

43. (currently amended) The method of claim 33, ~~wherein the aggregator comprises a content metadata crawler, the method~~ further comprising:

crawling the remote sources;
identifying program content based on one or more completed search requests; and
acquiring one or more programs based on the identified program content, wherein the acquired programs are stored in an aggregator database.

44. (currently amended) The method of claim 43, wherein ~~the~~ identifying program content ~~step~~ further comprises using user profile information.

45. (original) The method of claim 44, wherein the user profile information includes one or more of user demographic information, user program viewing history, and user-provided information.

46. (currently amended) The method of claim 33, further comprising verifying that a user is authorized to request the searches.

47. (currently amended) The method of claim 46, wherein when the user is not authorized to request the searches, further comprising notifying the user terminal that the search request is denied.

48. (currently amended) The method of claim 46, further comprising:

filtering the search request based on ~~the~~a user's profile, wherein the filtering steps apply filters comprising one or more of program content type and program content provider.

49. (original) The method of claim 46, wherein the program content search request includes a free form question, further comprising:

comparing a supplied search term in the free form question with a database of indexed suggestion keywords;

determining a relevance of the supplied search term, comprising:

calculating vector differences of the supplied search term and indexed keywords, thereby creating a list of suggestion key words,

retrieving a user profile,

ranking the suggestion keywords based on the user profile,

appending the list of suggestion keywords to the search request form,

thereby creating an augmented search request form,

routing the augmented search request form to a search engine server, and

searching content metadata for occurrences of the search criteria.

50. (currently amended) A video and multimedia aggregator for use in a distributed digital communication network, comprising:

means for requesting a search for program content;

means for suggesting content based on a user's past search ~~criteria~~criterion or previously downloaded content;

means for processing the search request;

means for searching local and remote sources for the program content;

means for acquiring metadata related to the program content;

means for displaying the acquired metadata;

means for receiving a program content download request from a user;

means for determining that the requested program content is currently unavailable at the local and remote sources;

means for maintaining a list of a plurality of active searches based on the requested program content responsive to determining that the requested program content is currently unavailable at the local and remote sources;

means for acquiring the program content in the download request from said user responsive to a content change made to at least one of the local and remote sources, the content change matching at least one of the active searches, if said program content has a viewing audience above a predetermined threshold and meets a predetermined selection ~~criteria~~criterion that rejects specific items;

~~means for displaying the acquired program content at a user terminal;~~

means for billing a user of the user terminal;

means for periodically crawling the communications network automatically, thereby retrieving programming information for programs not indexed on the aggregator;

~~means for displaying said acquired one or more of the one or more identified programs in response to said program content search request;~~

means for receiving a user selection for a program of said acquired one or more of the one or more identified programs; and

means for delivering said user selected program to said user terminal.

51. (original) The aggregator of claim 50, wherein the means for requesting the search comprises means for receiving and routing the search request.

52. (original) The aggregator of claim 50, wherein the means for processing the search request, comprises:

means for constructing a search request form;

means for suggesting content to supplement the search request;

and means to provide the search results to the user terminal.

53. (original) The aggregator of claim 50, further comprising means for providing user fees to a content provider.

54. (currently amended) An apparatus comprising:

a processor; and
memory storing instructions that, when executed by the processor, cause the apparatus to perform:

receiving a program content search request from a user terminal in a communications network;

suggesting additional content based on a user's past search ~~criteria~~ criterion or previously downloaded content;

searching a local content database based on the program content search request;

searching one or more remote content databases based on the program content search request;

determining that the program content search request does not yield a matching result with respect to the local content database and the one or more remote content databases;

maintaining a list of a plurality of active searches based on the program content search request responsive to determining that the program content search request does not yield a matching result with respect to the local content database and the one or more remote content databases;

identifying one or more programs based on the searches;

acquiring one or more of the one or more identified programs from one or more of the local content database and the remote databases ~~in response to said program content search request from said user terminal~~ responsive to a content change made to at least one of the local content database and the remote databases, the content change matching at least one of the active searches, if said one or more identified programs has a viewing audience above a predetermined threshold and meets a predetermined selection ~~criteria~~ criterion that rejects specific items;

~~displaying said acquired one or more of the one or more identified programs in response to said program content search request;~~

receiving a user selection for a program of said acquired one or more of
the one or more identified programs; and
delivering said user selected program to said user terminal.

55. (previously presented) The apparatus of claim 54, wherein the instructions include at least one instruction that, when executed by the processor, causes the apparatus to perform:

decoding the one or more programs received from the remote databases;
storing the decoded programs;
encoding the stored programs and the programs from the local content database for delivery to the user terminal; and
delivering the encoded programs to the user terminal.

56. (new) An apparatus comprising:

a request and results processing server; and
a search engine server;

wherein the request and results processing server includes a content search suggestion engine configured to suggest programming content based on at least one of a user's past search criterion and previously downloaded content, and

wherein the search engine server includes a search engine processor configured to maintain a list of a plurality of active searches related to the suggested programming content, and wherein the search engine processor is configured to receive a notification that a change is made to a program content database, and wherein the search engine processor is configured to determine that a match exists between the list of active searches and the change made to the program content database, and wherein the search engine server is configured to forward a notification of the match to the request and results processing server responsive to determining that a match exists between the list of active searches and the change made to the program content database.

57. (new) The apparatus of claim 2, wherein the coder processor formats the programming based on a method of playback at a terminal associated with the user, a type associated with the programming, an indication as to whether the user intends to store the programming at the terminal, and a type and bandwidth of a connection the terminal has with the remote content server.